

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

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BRAINWAVE SCIENCE, INC.

Plaintiff

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Defendant Lawrence Farwell's Motion to Revise
the Scope of Work in the Mindfire Agreement.

- against -

Civil Action No.: 21-cv-4402 (BMC-RLM)

ARSHEE, INC., DR. LAWRENCE A. FARWELL,
DR. THIERRY MAISON and BRAIN
FINGERPRINTING FOUNDATION

Defendants.

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Honorable Brian M. Cogan
United States District Court Judge
U.S. Eastern District, New York

January 8, 2023

Dear Judge Cogan:

1. I am a Defendant in this case.
2. I respectfully request that this Court order that the Scope of Work in the contract between Dr. Lawrence Farwell, Brainwave Science, Inc., and Mindfire Technology be modified as described herein in ¶ 15 and ¶ 16.
3. The six software programs now before this Court as evidence in this case, and where said evidence in each case is located and accessible to this Court, are as follows.
 - a. Farwell Brain Fingerprinting 3.0 (“Dr. Farwell Dropbox” online folder to which Mindfire has been provided access) is a version of Dr. Farwell’s Brain Fingerprinting software developed by Dr. Farwell in the early 1990s that Dr. Farwell applied at the FBI, the CIA, the US Navy, and in scientific research, scientific publications, and applications in criminal investigations, intelligence, and counterterrorism.
 - b. Farwell Brain Fingerprinting 4.0 (Dr. Farwell Dropbox) is a version of Dr. Farwell’s Brain Fingerprinting software developed by Dr. Farwell in the early 2000s that Dr. Farwell applied in scientific research, scientific publications, and , and applications in criminal investigations, intelligence, and counterterrorism. It comprised the addition to 3.0 of a more advanced data analysis section.
 - c. Farwell Brain Fingerprinting 5.0, aka Neurodyne (Dr. Maison TFS) is a newer version of the Farwell Brain Fingerprinting software ported from versions 3.0 and 4.0 to the Visual Studio / Microsoft .NET environment and translated to the C# language. Dr. Maison developed it and gave it to Dr. Farwell. This is the software labeled “Dr. Larry Farwell’s Application” in Plaintiff’s CEO’s Affidavit (EFS #20-2, Exhibits B, C, and D) and submitted to Codequiry.
 - d. Farwell Brain Fingerprinting 6.0 (Dr. Maison TFS) is the software that Dr. Farwell sold, transferred, or demonstrated to clients and allowed scientific colleagues at the University of Canterbury to use in conducting research in collaboration with Dr. Farwell.
 - e. Dr. Maison BWS Software, aka “iCognitive” (Brainwave Science TFS) is the version of the software developed by Dr. Maison for BWS **before BWS obtained a copy of “Farwell Brain Fingerprinting 5.0” / “Neurodyne” / “Dr. Larry Farwell’s Application” from Dr. Maison** on June 29, 2021. Like Farwell Brain Fingerprinting 5.0, it was ported from Farwell Brain Fingerprinting 3.0 and 4.0 to the Visual Studio / Microsoft .NET environment and translated to the C# language.
 - f. BWS Fraudulently Modified Software, also aka “iCognitive” (Brainwave Science TFS) is a modified version of the software originally developed by Dr. Maison for BWS that BWS later modified **to make it appear more similar to “Dr. Larry Farwell’s Application” after BWS obtained a copy of “Dr. Larry Farwell’s Application” /**

“Farwell Brain Fingerprinting 5.0” / “Neurodyne” from Dr. Maison on June 29, 2021.

4. The Scope of Work is based on the definition of Plaintiff Brainwave Science, Inc.’s (BWS) “confidential or proprietary information” that assumes that the facts are as follows:
 - a. As BWS’ CEO Ika (“Ika”) stated under oath in a hearing on November 30, 2021, BWS’ software contains no public domain, open source material. All of the same constitutes “confidential or proprietary information.”
 - b. As Ika stated in his Affidavit of November 3, 2021 (EFS #20-2):
 10. The challenge in developing and marketing any P300 based system lies not within the concept of P300 measurement itself but in creating a system which, among other things,
 - a) prompts testing personnel for appropriate stimuli;
 - b) displays stimuli to testing subjects in optimal order and at optimal intervals;
 - c) captures appropriate P300 brainwave responses;
 - d) disregards and/or eliminates extraneous responses (“noise”) which may produce false positive or false negative results;
 - e) detects and disregards any attempted countermeasures by suspects or others involved in conducting testing;
 - f) performs appropriate analysis of P300 measured responses utilizing statistical and machine learning algorithms and Artificial Intelligence;
 - g) generates unbiased reports for use by examiners, investigating agencies and legal authorities.
 - c. As Plaintiff represented in Ika’s Affidavit (EFS #20-2, Exhibits B, C, and D), the Codequiry test and user interface screenshot comparisons therein were between Dr. Larry Farwell’s Application and **Dr. Maison BWS Software** (developed before 6/29/2021), and not between Dr. Larry Farwell’s Application and **a modified version of BWS Software, modified by BWS to make it appear more similar to Dr. Larry Farwell’s Application after BWS obtained a copy of Dr. Larry Farwell’s Application from Dr. Maison** on June 29, 2021.
5. It has now been proven, and agreed by all parties, that the facts are not as stated in 3.a. and 3.b. above. The following facts are now undisputed.
 - a. Approximately 90% of BWS’ code (all versions) is public-domain, open source, and available to the public. The only parts of the code that are not public domain are some of the parts in the sections that communicate with the headset (which is different from Dr. Farwell’s headset). Said sections comprise about 20% of the software, and do not include the code comprising 4.b.10. a) – g) above.

- i. Even the Plaintiff now acknowledges the same. In a Statement of Undisputed Material Facts (EFS 106-1), Plaintiff stated: “Approximately 90% of the source code developed by Maison for Brainwave is ‘open source.’ (Tomkins Affirmation, Exhibit A, 37:9-37:12).”
 - b. Regarding BWS’ statement that “The proprietary system developed by Brainwave addressed a number of problems...” Every method, algorithm, and technique contained in the code Dr. Maison developed for BWS was ported directly from Dr. Farwell’s pre-existing Farwell Brain Fingerprinting 3.0 and 4.0. This has been thoroughly documented in Dr. Farwell 12/27/2022 Affidavit and the Exhibits thereto and Dr. Farwell Affidavit (EFS #24) and Dr. Maison Affidavit (EFS #89). An examination of the evidence now before this Court – in BWS TFS and Dr. Maison TFS now being subjected to software comparisons by Mindfire – will show that all of the code/algorithms for eliminating “noise” were copied directly from code provided to Dr. Maison by Dr. Farwell. In fact, the only algorithm for eliminating “noise” that is not common to several thousand other programs is the optimal digital filters that were first published in the field of event-related brain potential research by Dr. Farwell (Farwell et al. 1993¹) and were translated line-for-line by Dr. Maison from Dr. Farwell’s code to BWS code. (Dr. Farwell’s 12/27/2022 Affidavit, Dr. Farwell’s Dropbox, Dr. Maison’s EFT, BWS EFT).
 - c. Moreover, the statement that “problems” had “previously prevented the effective use of P300-related technology by field agents” is patently false. Dr. Farwell and his colleagues, including other field agents with intelligence and counterterrorism agencies such as the FBI and the CIA, have been successfully using the Farwell Brain Fingerprinting P300-related technology in the field for over 20 years (EFS #80, Dr. Farwell’s 12/27/2022 Affidavit).
- 6. Regarding 3.c. above, BWS has stated (EFS #20, EFS #20-2 and Exhibits thereto) that the comparison in Codequiry and the screenshots in Ika’s Affidavit (EFS #20-2, Exhibits B, C, and D) were between Dr. Larry Farwell’s Application and **Dr. Maison BWS Software** (developed before 6/29/2021). Dr. Farwell and Dr. Maison have stated that said comparisons were between Dr. Larry Farwell’s software and **a modified version of BWS Software, modified by BWS to make it appear more similar to “Dr. Larry Farwell’s Application” after BWS obtained a copy of “Dr. Larry Farwell’s Application” from Dr. Maison** on June 29, 2021.
 - a. The evidence to prove which of these positions in ¶6 corresponds to the facts is now before this court in BWS TFS and Dr. Maison TFS – which are now accessible to Mindfire – or will shortly be if the parties comply with the Court’s order to submit the relevant evidence to Mindfire by allowing Mindfire access to the respective TFS repositories where the software exists.
 - b. One of the modifications of the Scope of Work proposed below will serve to provide this Court with a definitive, objective answer regarding which of these two contradictory positions is in accord with the actual facts.
- 7. Ika’s Affidavit (EFS #20-2, Exhibit C) described the purported comparison of Dr. Maison BWS Application with Dr. Lawrence Farwell’s Application in Codequiry. It stated (p. 2):

¹ Farwell, L. A., Martinerie, J. M., Bashore, T. R., Rapp, P. E., and Goddard, P.H. (1993). Optimal digital filters for long latency event-related brain potentials. [*Psychophysiology*, 30, 3, 306-315](#)

- a. “We submitted Brainwave Science software and Brain Fingerprinting LLC [Dr. Farwell] software to the Codequiry Engine.”
 - b. “All the software projects developed by Brainwave Science for iCognitive software” were compared with “The software projects that is [sic] used by Larry Farwell by Brain Fingerprinting LLC. for NeuroDyne software.” [emphasis added]
 - c. “The codequiry [sic] Engine Results are in the next three pages.”
 - d. “Note: the size of the application is huge. So, the files are divided into three sections and diagnosis was done.”
8. On pages 3 – 6, Exhibit C states:
- a. “99% of brainwave science’s 5117 proprietary files are used illegally in Larry Farwell’s application in these projects”;
 - b. “99% of brainwave science’s 2442 proprietary files are used illegally in Larry Farwell’s application in these projects”;
 - c. “99% of brainwave science’s 255 proprietary files are used illegally in Larry Farwell’s application in these projects”;
9. In summary, Ika stated in a sworn affidavit that “All of BWS software code was submitted to Codequiry, and that the analysis proved that “99% of brainwave science’s ... proprietary files are used illegally in Larry Farwell’s application in these projects.”
10. By simple arithmetic, Ika’s sworn statement – which forms the foundation of this entire lawsuit – could not possibly be true. It is undisputed that 20% of BWS software is the part that communicates with the headset, and that the part of the software that communicates with the headset is totally different between BWS software and Dr. Farwell’s software. Therefore, it is mathematically and logically impossible for Ika’s statement that “99% of brainwave science’s ... proprietary files are used illegally in Larry Farwell’s application in these projects” to be true. Even if Dr. Farwell’s software were identical, line-for-line, with all of BWS’ except the admittedly different sections that communicate with the headset, only 80% of the code would be identical, not 99%.
11. One of the modifications to the Mindfire Scope of Work proposed below will provide this Court with a definitive, objective determination of the relevant facts regarding the issue described immediately above. This issue is a major part of the foundation of BWS’ entire case. This Court has not yet issued a finding of fact regarding the same, and this objective determination is required for this Court to issue a finding of fact based on actual facts and not simply the unsubstantiated (and demonstrably and admittedly false) statements of the Plaintiff.
12. The other proposed modifications of the Statement of Work will provide this Court with the necessary objective information to determine which of the two opposing sets of purported facts now before the Court corresponds to the actual facts. In order to issue findings, orders, and decisions based on facts – and not only on unsubstantiated statements by parties (BWS, Ika, and Tomkins) whose previous statements have been proven and even admitted to be false – it is necessary for this Court to have access to the facts that will be established and proven in the forensic analysis of software by Mindfire proposed herein.
13. The current Statement of Work will determine whether Dr. Farwell’s software contains “any portion of the program Brainwave Science, Inc. originally submitted to Codequiry as its code.” It is undisputed **that all of Dr. Farwell’s Farwell Brain Fingerprinting programs developed since**

1985 – a including the software Dr. Farwell and his colleagues provided to the CIA in 1993 – as well as the software now in use in dozens of laboratories around the world who are conducting research based on Dr. Farwell’s original Brain Fingerprinting invention patented in 1994 and 1995, **all of these contain “any portion of the program Brainwave Science, Inc. originally submitted to Codequiry as its code.”** It is undisputed that approximately 90% of said BWS program is open source, and there obviously is overlap between this and all of the other programs around the world implementing Dr. Farwell’s Brain Fingerprinting invention. **Such a finding by Mindfire will add nothing to what we already know, and will provide no factual information to which this Court can apply the law to determine the central issues of this case: Whether the Plaintiff’s complaint is factual or fraudulent, and whether or not the Plaintiff’s case has merit.**

14. The Mindfire Scope of Work currently reads as follows:

3. SCOPE OF WORK

Mindfire to evaluate Dr. Farwell’s software and determine whether it includes “confidential or proprietary information” of Brainwave Science, Inc. “Confidential or proprietary information” is defined as “any portion of the program Brainwave Science, Inc. originally submitted to Codequiry as its code,” which shall constitute the code submitted by BWS to Mindfire, as per Preliminary Injunction in US District Court for the Eastern District of New York case 21-cv-4402.

Dr. Farwell shall submit affidavits confirming that code submitted to Mindfire includes true and accurate copies of code he submitted to the Clinical Legal Studies Department at University of Canterbury, New Zealand and the Forensic Science Laboratory for the Government of Delhi, India and any other third parties to whom Dr. Farwell intends to convey code. Prior to conducting the code comparison, Mindfire will conduct a preliminary review of the code submitted by Dr. Farwell. The purpose of this review is to ensure that the code submitted represents a true and accurate copies of code conveyed, or to be conveyed, by Dr. Farwell to the above referenced and/or other third parties. Mindfire shall conduct, implement and report upon this verification in a manner to be determined by Mindfire following input from both parties.

Pursuant to the Court’s Order, the code comparison is being conducted to confirm whether the code provided by Defendant Dr. Farwell contains any portion(s) of the code submitted by Plaintiff BWS. If Mindfire finds any portion of the code provided by Defendant Farwell to contain any significant portion(s) of the code submitted by Plaintiff BWS, Mindfire will suspend its comparison and provide a report on same to Dr. Farwell and BWS. Otherwise, Mindfire will complete its code comparison and submit a report on the same to Dr. Farwell and BWS.

15. A forensic analysis of the software in question according to the current Scope of Work would be worse than useless. The current Scope of Work assumes that Plaintiff’s representations regarding BWS’ “confidential or proprietary information” were factual, and mandates testing and conclusions based on that false assumption. Now, even Plaintiff agrees in a Statement of Undisputed Material Facts (EFS 106-1) that the facts are extremely different from said representations, e.g., BWS’ software is factually “90% public domain,” vs. the “0% public domain” false “fact” originally alleged by BWS on which the current Mindfire Scope of Work is based.
16. All of the below proposed modifications are necessary in order for Mindfire to determine whether or not Dr. Farwell’s software that has been or is to be distributed to third parties comprises BWS’

“confidential or proprietary information,” in light of the actual facts regarding what BWS’ software comprises, which of the several different versions of BWS software are being compared, what information therein is public domain, and what information therein is actually confidential or proprietary. Without all of the below modifications, no meaningful comparisons can be made, and no meaningful conclusions can be drawn regarding whether Dr. Farwell’s software contains BWS’ actual, factually confidential or proprietary information.

17. I respectfully request that said Scope of Work be modified to the following:

I. Mindfire to evaluate Dr. Farwell’s software and determine whether it includes “confidential or proprietary information” of Brainwave Science, Inc. “Confidential or proprietary information” is defined as “the code developed by Dr. Maison for Brainwave, except what is publicly available, open source, or public domain, as contained in Brainwave Science’s TFS to be accessed by Mindfire. Modifications to the BWS code, if any, made by Brainwave after Brainwave received “Dr. Larry Farwell’s Application” from Dr. Maison on June 29, 2021, including but not limited to user interfaces modified to appear more similar to Dr. Larry Farwell’s Application and the code that generated what was displayed on said user interfaces, are not Brainwave’s “confidential or proprietary information.”

II. Dr. Farwell shall submit affidavits confirming that code submitted to Mindfire includes true and accurate copies of code he allowed students and faculty at the Clinical Legal Studies Department at University of Canterbury, New Zealand to use, and provided to the and the Forensic Science Laboratory for the Government of Delhi, India and any other third parties to whom Dr. Farwell intends to convey code. As a part of its forensic analysis and report, Mindfire will conduct a review of the code submitted by Dr. Farwell. The purpose of this review is to ensure that the code submitted includes true and accurate copies of code conveyed, or to be conveyed, by Dr. Farwell to the above referenced and/or other third parties. Mindfire shall conduct, implement and report upon this verification in a manner to be determined by Mindfire following input from both parties.

III. The Report to be prepared by Mindfire shall include the following findings:

1. Whether each of the software programs provided by Defendant Dr. Farwell contains Brainwave’s “confidential or proprietary information,” as defined herein.

2. Whether the code submitted by Brainwave to Codequiry was comprised solely of:

a. Dr. Maison BWS Software, aka “iCognitive” (Brainwave Science TFS), the version of the software developed by Dr. Maison for BWS before BWS obtained a copy of “Farwell Brain Fingerprinting 5.0” / “Neurodyne” / “Dr. Larry Farwell’s Application” from Dr. Maison on June 29, 2021;

Or, alternatively, whether the code submitted by Brainwave to Codequiry contained any of:

b. A modified version of the software originally developed by Dr. Maison for BWS, a version that BWS modified to make it appear more similar to “Dr. Larry Farwell’s Application” after BWS obtained a copy of “Dr. Larry

Farwell's Application" / "Farwell Brain Fingerprinting 5.0" / "Neurodyne" from Dr. Maison on June 29, 2021.

3. Whether the code represented by Brainwave as (a.) immediately below in Plaintiff's Complaint (EFS #1) and MOL in Support of Motion for Summary Judgment (EFS #20) and Ika's Affidavit ("Ika's Affidavit," EFS #20-2 and Exhibits B, C, and D thereto), and specifically the screenshots in said Exhibits, B, C, and D, was:
 - a. Dr. Maison BWS Software, aka "iCognitive" (Brainwave Science TFS), the version of the software developed by Dr. Maison for BWS before BWS obtained a copy of "Farwell Brain Fingerprinting 5.0" / "Neurodyne" / "Dr. Larry Farwell's Application" from Dr. Maison on June 29, 2021;

Or, alternatively, whether said code contained any of:

 - b. A modified version of the software originally developed by Dr. Maison for BWS, a version that BWS modified to make it appear more similar to "Dr. Larry Farwell's Application" after BWS obtained a copy of "Dr. Larry Farwell's Application" / "Farwell Brain Fingerprinting 5.0" / "Neurodyne" from Dr. Maison on June 29, 2021.
4. Whether BWS' representation that the Codequiry comparison comprised "All" of Dr. Maison's BWS Software and of Dr. Larry Farwell's Application was factual, or, alternatively, not all of BWS' software and/or Dr. Larry Farwell's Application were submitted to the Codequiry comparison, as proven by the evidence where said software resides, in BWS TFS and Dr. Maison TFS.
5. Whether or not the facts are as stated in the following statements by Plaintiff in said Exhibit C, as proven by the evidence where said software resides, in BWS TFS and Dr. Maison TFS.
 - a. "99% of brainwave science's 5117 proprietary files are used illegally in Larry Farwell's application in these projects";
 - b. "99% of brainwave science's 2442 proprietary files are used illegally in Larry Farwell's application in these projects";
 - c. "99% of brainwave science's 255 proprietary files are used illegally in Larry Farwell's application in these projects."
6. Whether Dr. Maison BWS Software contains:
 - a. No open-source, public-domain information, as stated by Ika under oath in a hearing on November 30, 2021;

Or, alternatively

 - b. Approximately 90% open-source, public-domain information, as both Plaintiff and Defendants have subsequently stated is an Undisputed Material Fact.
7. Regarding the following features of Dr. Maison Software:
 - a) prompts testing personnel for appropriate stimuli;

- b) displays stimuli to testing subjects in optimal order and at optimal intervals;
 - c) captures appropriate P300 brainwave responses;
 - d) disregards and/or eliminates extraneous responses (“noise”) which may produce false positive or false negative results;
 - e) detects and disregards any attempted countermeasures by suspects or others involved in conducting testing;
 - f) performs appropriate analysis of P300 measured responses utilizing statistical and machine learning algorithms and Artificial Intelligence;
 - g) generates unbiased reports for use by examiners, investigating agencies and legal authorities.
- a. Were said features developed by BWS in or about 2019, as Ika stated in Ika’s Affidavit (EFS #20-2);
Or, alternatively
 - b. Are said features open-source, public-domain information, having been previously developed by Dr. Farwell and conveyed to the public domain in Dr. Farwell’s patents, scientific publications, and software developed and distributed prior to the founding of BWS, including but not limited to Farwell Brain Fingerprinting 3.0 and 4.0.

18. I further respectfully request that this Court order Plaintiff and Defendant to provide to Mindfire all information and access to software that is necessary or useful for Mindfire to conduct the above described forensic analysis, including but not limited to access to Dr. Maison TFS (Defendants) and BWS TFS (Plaintiff) – which constitute the only places where their respective software programs that were developed under MS Visual Studio / .NET reside in complete, accurate, and un-fakeable form.

Lawrence A. Farwell

Dr. Lawrence A. Farwell

Defendant